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16 FEBRUARY 1967	058-AMB.01
FINAL REPORT	
<u>DISSECTION OF HATCH ACTUATOR BREACH</u> <u>CARTRIDGE, P/N A218-10 (15-1006)</u>	

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Report 058-AMB.01
Model 195B
16 February 1967
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FINAL REPORT

DISSECTION OF HATCH ACTUATOR BREECH
CARTRIDGE, P/N A218-10 (15-1006)

Contract No. N/A

Laboratories: SPACE SIMULATION AND SYSTEMS

Prepared By P. Landolt
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Department Manager
Space Simulation and
Systems Laboratories

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Laboratory Project Engineer

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REPORT 058-AMB.01

MODEL 195B

ABSTRACT REPORT

↓ The A218-10 Cartridge which was qualified for the NASA Gemini, is a pyrotechnic device which is used to initiate the breech of the hatch actuator. In order to fabricate identical cartridges for Gemini B, it ^{was} ~~is~~ necessary to ascertain the nominal particle size and total weight of the PKNO_3 pyrotechnic material in the output charge of the cartridge. ()

↑ A cartridge, S/N 102, was dissected and the PKNO_3 was recovered and analyzed. This test was conducted by the McDonnell Solid Propellant and Explosive Devices Test Laboratory on 5 January 1967.

The cartridge was dissected by cutting through the D203-20 Propellant Can near the area where it is crimped to the E218-6 Cartridge Base Assembly. A cross section of the cartridge is shown in Figure 1 on page 3 and a photograph of the dissected cartridge is on page 4.

The PKNO_3 , which was recovered from the dissected cartridge was a fine powder and weighed 10 grains. Project personnel identified the supplier of the PKNO_3 and it was determined that the powder is Flare Northern IP10.

The results of the test provides sufficient information about the output charge of the A218-10 cartridge so that an identical cartridge can be fabricated.

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LIST OF EQUIPMENT AND INSTRUMENTS

EQUIPMENT AND INSTRUMENTS USED IN THIS TEST ARE LISTED BELOW. APPLICABLE CALIBRATION RECORDS ARE AVAILABLE FOR INSPECTION.

<u>ITEM</u>	<u>MANUFACTURER AND MODEL NUMBER</u>	<u>SERIAL OR LABORATORY NUMBER</u>
GRAIN SCALE	LYMAN-CHAUS MODEL M-5	S/N 7012

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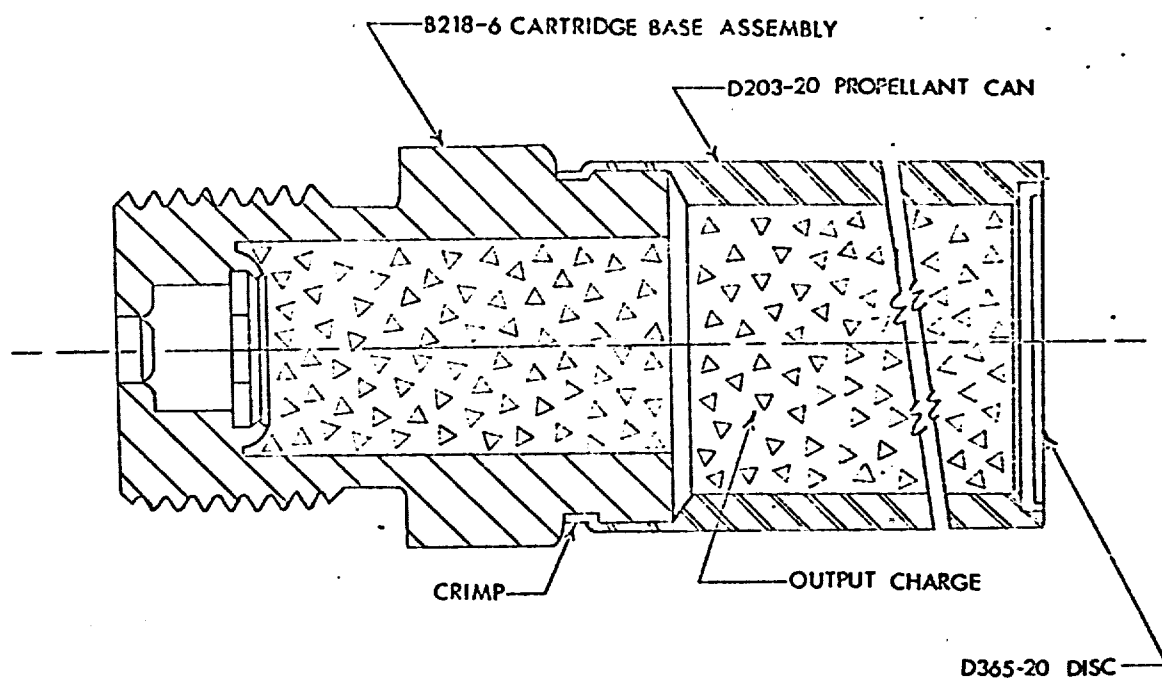
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FIGURE 1
CROSS SECTION OF A
A218-10 CARTRIDGE



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PHOTO D4E-436349

THE OUTPUT CHARGE OF THE DISSECTED A218-10 CARTRIDGE

